

REMARKS

Claims 1-38 are currently pending, with claims 1, 6, 15 and 21 being the independent claims. Claims 1-38 have been amended. The amendments to claims 2-5, 7-14, 16-30 and 22-38 are to correct minor claim wording, and are cosmetic in nature. Reconsideration of the application, as amended, is respectfully requested.

Claims 1, 6, 15 and 21 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In response to this rejection, Applicant has amended the claims in a manner that is believed to address each specific rejection. Withdrawal of the rejection is therefore requested.

In the March 3, 2006 Office Action, independent claims 1, 6, 15 and 21, and dependent claims 2-5, 7, 10-14, 16-20, 22 and 25-38 were rejected under 35 U.S.C. §102(e) as anticipated by U.S. Patent No. 6,430,183 (“*Satran*”), while dependent claims 8, 9, 23 and 24 were rejected under 35 U.S.C. §103(a) as unpatentable over *Satran* in view of U.S. Patent No. 6,331,983 (“*Haggerty*”). For the following reasons, it is respectfully submitted that all claims of the present application are patentable over the cited reference.

Satran discloses a data transmission system which comprises a plurality of transmitters that transmit data over a broadband channel to multiple receivers (see col. 3, lines 30-33). *Satran* (col. 4, lines 14-16; Fig. 2) teaches that packets are categorized into two main types, i.e., a first type containing “First Chunk 200” and a second type containing “Middle/Last Chunk 250”. *Satran* (col. 4, lines 17-22) states, “the packet corresponding to First Chunk 200 contains a 4 byte Packet Header 210 ... that includes a 13 bit Source Identifier (SID) 211 used in identifying common logical sources from amongst the various host computers that may be connected to any given transmitter”. *Satran* (col. 4, lines 23-29) states, “First Chunk 200 also contains an 8 byte Block Header 220, the first 4 bytes of which includes a 12 bit Block Size field 221 containing the size, in bytes, of the data block being transmitted, with the remaining 4 bytes of Block Header 220 being reserved for Block Identifier (BID) 226, used by a receiver to identify given blocks of data”.

Satran (col. 4, lines 32-34) states, “BID is comprised of two components, one flag bit (bit 0) labeled Unicast Flag (UF), and Address Field 228 made up of the remaining 31 bits of BID”.

Satran (col. 4, lines 34-37) further states, “Unicast Flag 227 is used by a receiver to determine whether the block being transmitted is a unicast or a multicast transmission block”.

Satran (col. 4, lines 48-52) teaches that transmitted data blocks are addressed to multiple receivers that are a subset of a larger group of receivers, i.e., data transmission is multicast when UF is equal to “0”. *Satran* (col. 4, lines 52-57) states, “in this mode of operation, Address Field 228 can be masked and pattern matched against address templates in order to filter out unwanted data packets. In addition, bits 1 through 3 of Address Field 228 can concurrently be used as a Service Type (ST) Field 229 allowing groups of receivers to be addressed based upon their service mode”.

In particular, *Satran* (col. 5, lines 25-28) teaches that multicast group address filtering is accomplished in the receiver by comparing bits 1 and 31 through Address Field of the BID with an internally stored bit map. *Satran* (col. 5, lines 28-29) states, “this bit map is comprised of both a mask bit and a pattern bit map. *Satran* (col. 5, lines 29-33) further states, “the mask bit is first used to determine the relevant bits in Address Field 228 that represent the addresses of the group of interest, after which those relevant bits are compared against the pattern bit map. If all the relevant bits in Address Field 228 match those of the pattern bit map, the data block is received”.

In addition to the above-discussed method of multicast group address filtering, *Satran* (col. 5, lines 44-28) teaches that the receiver hardware can further process addresses through the method of Service Type Filtering. Here, *Satran* (col. 5, lines 45-50) states, “Service type (or service modes) are used in the transmission system to attach a particular organization or classification to the data that is being transmitted or received”.

However, *Satran* fails to teach, *inter alia*, the steps of “storing tables of addresses of receivers belonging to a multicast group in a packet-switched network and specific parameters of the receivers ... searching the tables based on the multicast address to determine addresses of receivers of the multicast group indicated by the multicast address and the specific parameters of the receivers,” along with the filtering step, as recited in amended independent method claims 1 and 6.

In accordance with the claimed invention, received multicast data packets are filtered based on their multicast address by a router that routes the packets by referring to information from a control unit that stores the information. In other words, it is not only the packet itself that comprises information for filtering. Rather, information obtained from tables that are stored in

the control point in advance is used to perform the filtering. Here, filtering information of receivers belonging to a multicast group is stored in tables at the control unit. As a result, a sender of information only needs to add a multicast address to a multicast packet without having to be aware of any filtering conditions of multicast groups. *Satran* fails to teach this concept that is encompassed by the methods of amended independent claims 1 and 6. In view of the foregoing, independent claims 1 and 6 are patentable over *Satran* and thus, reconsideration and withdrawal of the rejection under 35 U.S.C. §102 are in order, and a notice to that effect is earnestly solicited.

Haggerty relates to “a method and apparatus for controlling the flow of multicast traffic on a communications network, and more particularly to a method and apparatus for establishing a connection path for multicast traffic through a switched network, and across router/switch boundaries, which conserves network bandwidth” (see col. 1, lines 6-9). However, *Haggerty* fails to cure the deficiencies of *Satran*, because *Haggerty* fails to teach or suggest anything with respect to the storing, buffering, searching and filtering steps, as recited in amended independent claims 1 and 6. In view of the foregoing, independent claims 1 and 6 are patentable over the combination of *Satran* and *Haggerty* and thus, withdrawal of the rejection under 35 U.S.C. §103 are in order, and a notice to that effect is earnestly solicited.

Independent claims 15 and 21 are apparatus claims associated with independent method claims 1 and 6, respectively. Accordingly, independent claims 15 and 21 are patentable over *Satran* and *Haggerty*, individually or in the combination, for the reasons discussed above with respect to independent method claims 1 and 6.

In view of the patentability of independent claims 1, 6, 15 and 21, for the reasons set forth above, dependent claims 2-5, 7-14, 16-20 and 22-38 are all patentable over the cited prior art.

Based on the foregoing amendments and remarks, this application is in condition for allowance. Early passage of this case to issue is respectfully requested.

Respectfully submitted,
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By

A handwritten signature in black ink, appearing to read 'Alphonso A. Collins', written over a horizontal line.

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